Answers

Use these to check the method as well as the final answer.

1. The derivative is $2x - 6$ and the second derivative is 2.

$$(3, -4) \quad \text{minimum}$$

2. The second derivative is -2.

$$(6, 36) \quad \text{maximum value} = 36$$

3. The derivative is $3x^2 - 3$ and the second derivative is $6x$.

$$(-1, 2)\ \text{maximum}; \qquad (1, -2)\ \text{minimum}$$

4. The derivative $2x - 4$ is positive for $x > 2$.

$$x > 2$$